

Notice of Allowability

Application No.

10/821,790

Examiner

Christine Sung

Applicant(s)

TAI ET AL.

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/07.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Response to Amendment

1. The amendment filed on October 31, 2007 has been accepted and entered.
2. The request for continued examination filed on October 31, 2007 has been accepted and entered.

Allowable Subject Matter

3. Claims 1-25 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, none of the prior art of record specifies or makes obvious an integrated tunable sensing apparatus, namely the combination of the claimed elements in the particular ordering, namely the positioning of the substrate, cavity, elastic material, first reflection device, second reflection device, along with the other claimed elements. Faraone discloses all of the claimed elements, but does not specify that the first reflection device is formed on the backside of the substrate. Faraone discloses positioning of the reflection device on the backside of the substrate (see figure 3C), however this embodiment does not allow the elastic material to form a region including the tunable cavity region. In Figure 3C, the elastic element 25, does not form the tunable cavity (element 21). Further, one of ordinary skill in the art would not be motivated to modify the embodiment disclosed in 3A or 3C with the positioning of the substrate (element 27') as disclosed in figure 3C. By placing the substrate, element 27, in the claimed position, the tunability of the cavity would be destroyed, as the substrate would prevent

the cavity from flexing/moving. Thus, although all of the elements and partial positioning of the elements has been disclosed by the prior art, none of the prior art of record specifies the particular claimed positioning of the elements.

Similarly, regarding claim 17, none of the prior art of record specifies a method of sensing electromagnetic radiation, namely the combination of steps of providing the claimed elements in the particular claimed order, namely the positioning of the substrate, cavity, elastic material, first reflection device and second reflection device. Faraone discloses all of the claimed elements, but does not specify that the first reflection device is formed on the backside of the substrate. Faraone discloses positioning of the reflection device on the backside of the substrate (see figure 3C), however this embodiment does not allow the elastic material to form a region including the tunable cavity region. In Figure 3C, the elastic element 25, does not form the tunable cavity (element 21). Further, one of ordinary skill in the art would not be motivated to modify the embodiment disclosed in 3A or 3C with the positioning of the substrate (element 27') as disclosed in figure 3C. By placing the substrate, element 27, in the claimed position, the tunability of the cavity would be destroyed, as the substrate would prevent the cavity from flexing/moving. Thus, although all of the elements and partial positioning of the elements has been disclosed by the prior art, none of the prior art of record specifies the particular claimed positioning of the elements.

The balance of claims are allowed for at least the above reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments regarding the positioning of the first reflective device with respect to the substrate and the other claimed elements is persuasive. The rejection of the claims has been withdrawn. (see above reasons for allowance).

Conclusion

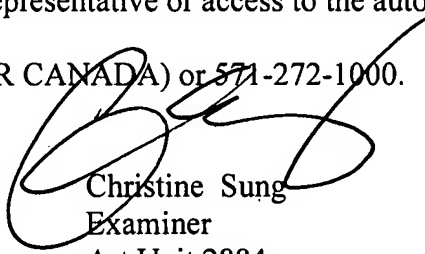
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 571-272-2448. The examiner can normally be reached on Monday- Friday 9-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christine Sung
Examiner
Art Unit 2884

CS